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Seasonal movement and variation in the southern populations of the Dusky Lark *Pinarocorys nigricans* (Sundevall)

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The Dusky Lark *Pinarocorys nigricans* (Sundevall) of Ethiopian Africa is a polytypic species of two spatially remote races: *P.n. nigricans* (Sundevall), 1850: Aapies R., Pretoria, Transvaal, and *P.n. erythropygia* (Strickland), 1850: Kordofan, Sudan. The northern race, *P.n. erythropygia* differs from the southern one in having the rump and upper tail-coverts ochraceous-tawny, and the outer tail-feathers and the bases of the others dull tawny. While often treated as discrete species, it is convenient to consider them as well-marked races of but a single species. Both races appear to have a closely similar post-breeding movement pattern, i.e., breeding in the dry season in heavily wooded savanna, then moving north or south as the case may be with the onset of the main rains into drier and more open habitats.

In the southern *P.n. nigricans*, the precise breeding range and nature of

its post-breeding movements have long been problems of great moment to students of Ethiopian birds. Chapin (1953) was one of the first workers to postulate that the form bred in the north of its range in a narrow belt from the central and northern districts of Angola, eastwards through the southern Congo and adjacent north Zambia to Tanzania, aestivating south of this to central South-West Africa, northern and eastern Botswana, the Transvaal, southern Moçambique and Zululand. Chapin was followed by White (1959) and Benson (1959), but Winterbottom (1957) considered *P.n. nigricans* to breed in the southern parts of its range, spending the off-season to the northward, i.e., the very reverse of what Chapin deduced from a study of museum specimen data, in so doing following Roberts (1940). Clancey (1964) followed Winterbottom in considering that the species bred in South Africa, ranging later north to the Congo. Smithers *et al.* (1959), rejected the Rhodesian breeding records as given in their *Check List* (Smithers *et al.* [1957]) in the light of Winterbottom's note, thus leaving only one record of breeding of *P.n. nigricans* for the South African Sub-Region, namely that of Bell-Marley of a nest on the Mkuzi Flats, Zululand, on 22nd September, 1933 (see Roberts [1940]).

Data culled from specimen material recently assembled in the Durban Museum show almost conclusively that Chapin, with his usual perspicacity, was correct in assuming that *P.n. nigricans* breeds in the north of its range in the dry season (June–November), ranging far to the southward between December and May. This shows up clearly on the accompanying Table. While in the south of the range, all birds, juveniles and adults alike, undergo a complete moult of the body plumage and the wing- and tail-feathers, mainly between January and April. Some juveniles are still in transitional moult into first-winter or pre-basic dress in late May.

TABLE

| Territory | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Remarks |
|------------------------|------|------|------|------|-----|-------------------------|------|------|-------|------|------|------|--|
| | | | | | | <i>P. n. nigricans</i> | | | | | | | |
| Zambia | | | | 3 | 14 | 1 | | 2 | 5 | | 2 | 1 | Apr. specimens from south. |
| Rhodesia | | | | 6 | 8 | | | | | | 1 | | Feb. and Nov. birds juvs. |
| Botswana | 1 | 1 | 1 | | | | | | | | | | |
| Transvaal | 1 | 2 | | 1 | | | | | | | | 1 | Dec. specimen dated 29th. |
| Sul do Save, P.E.A. | | | 10 | 15 | 6 | 1 | | | | | | | One from Beira dated 24th Mar. |
| | | | | | | <i>P. n. occidentis</i> | | | | | | | |
| Angola | | | | 1 | | 8 | | 3 | 2 | | | | Apr. specimen from S. Huila. |
| Zambia | | | | | 2 | | | | | | | | Livingstone specimens. |
| Rhodesia | 1 | 1 | 1 | 3 | 1 | | | | | | | | |
| Botswana | 2 | 1 | 2 | 1 | | | | | | | | | |
| S.W. Africa | 2 | 4 | 1 | | 1 | | | | | | | 1 | Dec. specimen dated 17th. Worn ad. commencing moult. |
| Sul do Save, P.E.A. | | | 3 | | | | | | | | | | |

Disposition by months of all specimens of *P. nigricans* examined. Note concentration of records from the north of the range of either race between June–November.

Study of birds from the breeding grounds in Angola and northern Zambia indicates the presence of quite well-marked variation within the present taxon *P.n. nigricans*, in that birds breeding in Angola, and, perhaps, the Kwango district and Kasai of the Congo, differ from those from further east in having the breast spotting smaller and less extensively distributed. From examination of material from the South African Sub-Region it appears that birds of the lightly spotted populations æstivate in the main to the west of those with heavy breast spotting. That the present *P.n. nigricans* is divisible into two races on the breast spotting character was first postulated by Irwin, *in litt.* Irwin believed that one of the forms was a true migrant, moving north and south between its breeding and æstival ranges, while the other was a locally nomadic one. The evidence now assembled suggests that both lightly and heavily spotted forms breed in the north of the southern sector of the species' disjunct range, the former in the west and the other to the eastward, both spending the off-season well south of the breeding grounds. The two forms also appear to be largely allohiemal.

I believe that the weight of evidence now favours, following Irwin's unpublished findings, the recognition of two races in the southern complex of populations, one of which will require a name. The southern populations of the Dusky Lark are now arranged in two subspecies as follows:

(a) ***Pinarocorys nigricans nigricans*** (Sundevall)

Alauda nigricans Sundevall, *Oefv.K.Sv.Vet.-Akad.Förhandl.*, vol. vii, 1850, p. 99: *Caffraria superiore*, the *Type* from the Aapies (Ape) R., Pretoria district, Transvaal.

♂. Upper-parts Fuscous (Ridgway [1912]), the feathers narrowly fringed with buffish white. Face boldly patterned or brindled in fuscous and buffy white. Below off-white, the breast heavily striated with black streak-like spots.

♀. Usually a little more brownish, less black above than the male. Facial pattern less bold. On under-parts more buffy white, the ground to the breast pale vinaceous buff, the striations more brownish black. First-winter ♂ and ♀ resemble the adult ♀. Wear results in a loss of the pale fringing to upper-parts, wings and tail.

Wings of 10 adult ♂♂ 118–126 (120.8), of 10 ♀♀ 112–117 (113.7) mm.

Material: 85. [Zambia, 28 (Salujinga, Fort Rosebery, Kawambwa, Livingstone, etc.); Rhodesia, 17; Botswana (Bechuanaland Protectorate), 3; Transvaal, 5; Sul do Save, Moçambique, 32 (mainly Lourenço Marques)].

Range: Breeds in the Miombo of the Katanga, Congo, and northern Zambia, eastwards to western Tanzania, spending the off-season mainly in eastern Botswana, Rhodesia, the Transvaal, Swaziland, southern Moçambique, and eastern Zululand. On breeding grounds present from about June–November, but birds move in throughout May, and some are still present in December. Judging by the long series from Lourenço Marques, present in numbers at the southern extremity of the non-breeding range from February–April, when birds undergo a complete moult. Birds leave the northern breeding grounds in December, moving south in leisurely fashion in parties of varying proportions.

Remarks: As noted above, Smithers *et al.* (1959), have rejected the



Photo: Dennis Cleaver

Ventral view of specimens of the two southern races of the Dusky Lark *Pinarocorys nigricans*.

Upper row: left *P. n. occidentis*, right *P. n. nigricans*. Specimens in freshly moulted condition.

Lower row: As in upper row, but specimens in moderately worn condition.
Note finer breast spotting in *occidentis*.

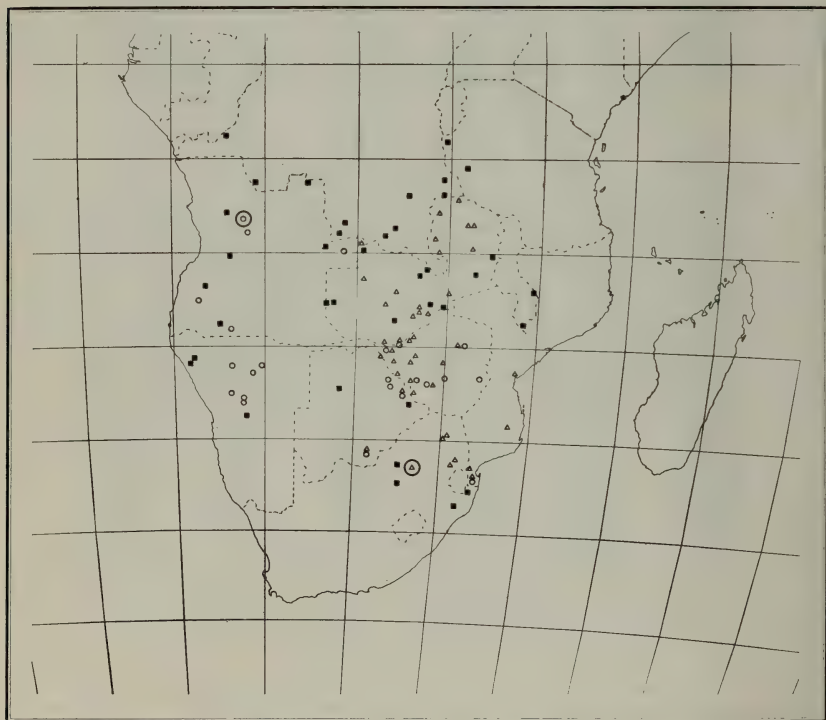
Rhodesian breeding records. The validity of the Mkuzi Flats, Zululand, record (Roberts [1940]) is now highly equivocal. The date (September) is satisfactory, but the breeding of this lark in Zululand, at the most southern tip of its known range, must be quite exceptional.

Sundevall's *Alauda nigricans* was based on a specimen taken by Wahlberg on its summering grounds in the Transvaal. As all the Transvaal specimens handled by me have been of the heavily streaked eastern race, I group such populations under this trinomen.

This lark must prove difficult to sex by gonad examination judging by the large number of wrongly sexed specimens in collections. Benson (1959) suspected this to be the case. Males far outnumber females in all series examined.

(b) ***Pinarocorys nigricans occidentis***, subsp. nov.

Description: Similar to *P.n. nigricans* as described above, but with spotting over the breast greatly reduced in size and distribution. With the



Map showing the distribution of the Dusky Lark in the southern half of Africa. Closed symbols represent records from the literature; open symbols indicate localities of specimens examined and determined as to subspecies.

- from the literature
- *Pinarocorys nigricans occidentis*
- △ *Pinarocorys nigricans nigricans*

reduction in size of each individual spot, the overall effect is one of mottling rather than bold striation (see photo).

Similar in size.

Material: 41. Angola, 14 (Sá da Bandeira and Vila d'Eca, Huila; Cazombo, Moxico; Cangandala and Mulundo, Malanje); Zambia, 2 (Livingstone); Rhodesia, 7; Botswana, 6 (Nata, Francistown, W. of Kanye); South-West Africa, 9 (Okahandja, Okanjande, Omaruru, Tsumeb, Okaukuejo); Moçambique, 3 (Lourenço Marques).

Type: ♀, adult. Breeding. Cangandala, Malanje, Angola (9° 44' S., 16° 33' E.). 27th August, 1965. Collected by F. Nobrega; *ex coll.* Instituto de Investigação Científica de Angola, Sá da Bandeira. In the collection of the Durban Museum. D.M.Reg. No. 23112.

Range: Breeds in central and northern Angola, and perhaps the Kwango and Kasai regions of the Congo. Post-breeding movements take present race south mainly to South-West Africa, northern and eastern Botswana, and western Rhodesia. Obtained also Sul do Save, Moçambique (February, 1953).

Measurements of the Type: Wing (flattened) 119, culmen from base 20, tarsus 30, tail 77 mm. Weight 44 gm.

Remarks: This race, with reduced spotting to the breast, appears to be almost entirely a dry country form. It breeds during the dry season in the north of its range, æstivating mainly in the South West Arid District, whereas nominate *P. nigricans* does so in more mesic regions of south-eastern Africa, this reflected in the assumption of heavier breast streaking.

Acknowledgments

126 specimens of the Dusky Lark were examined in furtherance of this study. To augment the small Durban Museum series, specimens were borrowed from the South African Museum, Cape Town, the Transvaal Museum, Pretoria, the Museu Dr. Alvaro de Castro, Lourenço Marques, the National Museum of Rhodesia, Bulawayo, and the Instituto de Investigação Científica de Angola, Sá da Bandeira.

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